

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application

Inventor: Benjamin Renaud

Appln. No.: 09/960,529

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Title: METHOD AND APPARATUS FOR SMART
DIRECTORIES FOR APPLICATION DEPLOYMENT

PATENT APPLICATION

Art Unit: 2193

Examiner: Tuan A. Vu

Customer No. 80548

PROPOSED CLAIM AMENDMENTS FOR EXAMINER'S AMENDMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In response to the Office Action of March 11, 2009, please amend the above-identified application as follows:

Amendments to the Claims begin on page 2 of this paper.

Remarks/Arguments begin on page 14 of this paper.

AMENDMENTS

Amendments to the Claims

1. (Currently Amended) A computer implemented method of automatically deploying an application across a distributed computing domain including a plurality of processing devices, the method implemented using programmed instructions executed on a computer to do the steps of: ~~comprising:~~

(a) automatically scanning for an undeployed application stored in an application directory accessible to at least one of the plurality of processing devices, the application directory including at least one currently deployed application;

(b) recognizing an undeployed application in the application directory; and

(c) deploying the undeployed application to a selected portion of the plurality of processing devices, such that the application is capable of being executed by the portion of the plurality of processing devices; wherein

when the undeployed application is placed in the application directory it is automatically deployed without requiring any other user step;

wherein the method includes:

obtaining a list of applications stored in the application directory;

comparing the list of applications stored in the application directory to a list of previously deployed applications in order to select the application to be deployed; and

deploying the selected application to the selected portion of the plurality of processing devices; and

wherein the selected portion of the plurality of processing devices is determined from an analysis of a plurality of attributes associated with the undeployed application and a plurality of attributes associated with the distributed computing domain.

2. (Canceled)

3. (Currently Amended) The method of Claim [[2]] 1, wherein the method further comprises the step of:

selecting the application to be deployed from the list of applications stored in the application directory when the application is absent from the list of previously deployed applications.

4. (Currently Amended) The method of Claim [[2]] 1, wherein the method further comprises the step of:

selecting the application to be deployed from the list of applications stored in the application directory when the value of a deployment indicator associated with the application differs from the value of a deployment indicator recorded on the list of previously deployed applications.

5. (Original) The method of Claim 4, wherein:
the deployment indicator is an attribute of a file containing the application.

6. (Original) The method of Claim 5, wherein:

the attribute of the file containing the application is the date of the file.

7. (Original) The method of Claim 4, wherein:

the deployment indicator is an attribute of a file associated with at least one separate file containing the application.

8. (Original) The method of Claim 7, wherein:

the attribute of the file associated with at least one separate file containing the application is the date of the file.

9. – 12. (Canceled)

13. (Original) The method of Claim 1, wherein:

the step of scanning is initiated periodically after the passage of a predetermined time interval.

14. (Original) The method of Claim 1, wherein:

the undeployed application is comprised of a plurality of application components contained in a single file.

15. (Original) The method of Claim 1, wherein:

the undeployed application is comprised of a plurality of application components each contained in a separate file.

16. (Original) The method of Claim 1, wherein:
the undeployed application is a J2EE application.

17 – 18 (Canceled)

19. (Currently Amended) A computer implemented method of automatically maintaining an application object across a distributed computing domain, the application object contained within at least one application file and the distributed computing domain including a plurality of processing devices, the method implemented using programmed instructions executed on a computer to do the steps of: ~~comprising the steps:~~

(a) retrieving a list of all of the application files located within an application directory;

(b) comparing the list of all of the files located within an application directory to a list of all of the files associated with currently deployed application objects;

(c) for each application file, deploying the application object contained in the application file when the application file is absent from the list of all the files associated with currently deployed application objects;

(d) for each application file, redeploying the application object contained in the application file when the application file differs from the corresponding file on the list of all of the files associated with previously deployed application objects; and

(e) for each application file on the list of all of the files associated with currently deployed application objects, undeploying the application object associated with an

application file when the application file on the list of all of the files associated with currently deployed application objects is absent from the list of all of the application files located within the application directory; wherein

when the undeployed application is placed in the application directory it is automatically deployed without requiring any other user step;

wherein when an application is removed from the application directory it is undeployed without requiring any other user action;

wherein the method includes:

obtaining a list of applications stored in the application directory;

comparing the list of applications stored in the application directory to a list of previously deployed applications in order to select the application to be deployed; and

deploying the selected application to the selected portion of the plurality of processing devices; and

wherein the selected portion of the plurality of processing devices is determined from an analysis of a plurality of attributes associated with the undeployed application and a plurality of attributes associated with the distributed computing domain.

20. (Previously presented) The method of Claim 19, wherein:

in the step of redeploying, the difference is determined by comparing the value of a deployment indicator associated with an application file with the value of a deployment indicator recorded on the list of currently deployed application objects.

21. (Original) The method of Claim 20, wherein:

the deployment indicator is an attribute of a file containing the application object.

22. (Original) The method of Claim 21, wherein:

the attribute of the file containing the application object is the date of the file.

23. (Original) The method of Claim 20, wherein:

the deployment indicator is an attribute of a file associated with at least one separate file containing the application object.

24. (Original) The method of Claim 23, wherein:

the attribute of the file associated with at least one separate file containing the application object is the date of the file.

25. (Original) The method of Claim 19, wherein:

the step of retrieving is initiated periodically after the passage of a predetermined time interval.

26. (Original) The method of Claim 19, wherein:

the application object is a J2EE application.

27. (Original) The method of Claim 19, wherein:

the application object is a J2EE Enterprise Bean.

28. (Original) The method of Claim 19, wherein:
the application object is a Web component.

29 – 36 (Canceled)

37. (Original) An article of manufacture including an information storage medium wherein is stored information, the information comprising:

a group of processor readable instructions adapted to operate on a processing device, wherein the group of processor readable instructions are adapted to operate the processing device according to the method of Claim 1.

38. (Original) An article of manufacture including an information storage medium wherein is stored information, the information comprising:

a group of processor readable instructions adapted to operate the processing device according to the method of Claim 19.

39. (Canceled)

40. (Previously Presented) A processing system including at least a first processing device and a memory device accessible by the first processing device, the processing system comprising:

a group of processor readable instructions stored in the memory device and operating the first processing device to perform a group of steps including:

(a) automatically scanning for an undeployed application stored in an application directory accessible to first processing device, the application directory including at least one currently deployed application;

(b) recognizing an undeployed application in the application directory; and

(c) deploying the undeployed application to a selected portion of the processing system, such that the application is capable of being executed by the portion of the processing system; wherein

when the undeployed application is placed in the application directory it is automatically deployed without any requiring other user step;

wherein the method includes:

obtaining a list of applications stored in the application directory;

comparing the list of applications stored in the application directory to a list of previously deployed applications in order to select the application to be deployed; and

deploying the selected application to the selected portion of the plurality of processing devices; and

wherein the selected portion of the plurality of processing devices is determined from an analysis of a plurality of attributes associated with the undeployed application and a plurality of attributes associated with the distributed computing domain.

41. (Original) The processing system of Claim 40, wherein:

the selected portion of the processing system includes the first processing device.

42. (Original) The processing system of Claim 40, further including a second processing device in communication with the first processing device, wherein:

the selected portion of the processing system includes the second processing device.

43. (Original) The processing system of Claim 42, wherein:

the first processing device and the second processing device are located on a first computer.

44. (Original) The processing system of Claim 43, wherein:

the first processing device is located on a first computer; and

the second processing device is located on a second computer.

45. (Previously Presented) A processing system including at least a first processing device and a memory device accessible by the first processing device, the processing system comprising:

a group of processor readable instructions stored in the memory device and operating the first processing device to perform a group of steps including:

(a) retrieving a list of all of the application files located within an application directory, the application directory including at least one currently deployed application;

(b) comparing the list of all of the files located within an application directory to a list of all of the files associated with currently deployed application objects;

(c) for each application file, deploying the application object contained in the application file when the application file is absent from the list of all the files associated with currently deployed application objects;

(d) for each application file, redeploying the application object contained in the application file when the application file differs from the corresponding file on the list of all of the files associated with currently deployed application objects; and

(e) for each application file on the list of all of the files associated with currently deployed application objects, undeploying the application object associated with an application file when the application file on the list of all of the files associated with currently deployed application objects is absent from the list of all of the application files located within the application directory; wherein

when the undeployed application is placed in the application directory it is automatically deployed without requiring any other user step;

wherein when an application is removed from the application directory it is undeployed without requiring any other user action;

wherein the method includes:

obtaining a list of applications stored in the application directory;

comparing the list of applications stored in the application directory to a list of previously deployed applications in order to select the application to be deployed; and

deploying the selected application to the selected portion of the plurality of processing devices; and

wherein the selected portion of the plurality of processing devices is determined from an analysis of a plurality of attributes associated with the undeployed application and a plurality of attributes associated with the distributed computing domain.

46. (Original) The processing system of Claim 45, wherein:

the application object is deployed on the first processing device.

47. (Original) The processing system of Claim 45, further including a second processing device in communication with the first processing device, wherein:

the application object is deployed on the second processing device.

48. (Original) The processing system of Claim 47, wherein:

the first processing device and the second processing device are located on a first computer.

49. (Original) The processing system of Claim 47, wherein:

the first processing device is located on a first computer; and

the second processing device is located on a second computer.

50 – 54 (Canceled)

55. (Currently Amended) A computer-implemented method for deploying applications to an application server, the method implemented using programmed instructions executed on a computer to do the steps of: comprising:

automatically deploying an application to an application server when corresponding unpackaged application files are added to a smart directory;

automatically undeploying the application when the corresponding unpackaged application files are removed from the smart directory ; wherein

when the undeployed application is placed in the application directory it is automatically deployed without requiring any other user step;

wherein when an application is removed from the application directory it is undeployed without requiring any other user action;

wherein the method includes:

obtaining a list of applications stored in the application directory;

comparing the list of applications stored in the application directory to a list of previously deployed applications in order to select the application to be deployed; and

deploying the selected application to the selected portion of the plurality of processing devices; and

wherein the selected portion of the plurality of processing devices is determined from an analysis of a plurality of attributes associated with the undeployed application and a plurality of attributes associated with the distributed computing domain.

56. (Previously presented) The computer-implemented method of claim 55 wherein the unpackaged application files are automatically packaged before they are provided to the application server.

REMARKS

The applicant would like to thank the examiner for the telephonic discussion of April 23, 2009.

The claims have been amended to avoid typographical errors.

In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a Notice of Allowance is requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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By: /Joseph P. O'Malley/
Joseph P. O'Malley
Reg. No. 36,226

FLIESLER MEYER LLP
650 California Street, 14th Floor
San Francisco, California 94108
Telephone: (415) 362-3800
Customer No. 80548